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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Haavard Aakre

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EXAMINER

FULLER, ROBERT EDWARD

ART UNIT

PAPER NUMBER

3676

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/588,777	Applicant(s) AAKRE, HAAVARD	
	Examiner ROBERT E. FULLER	Art Unit 3676	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 10-23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 August 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input checked="" type="checkbox"/> Other: <u>SU 969958 (Foreign Reference)</u> . |

DETAILED ACTION

Drawings

1. The drawings are objected to because the liquids in the chambers in Figure 1 should be provided with cross-hatching to make the figure clearer. Liquids should be cross-hatched in accordance with the standards set forth in MPEP 608.02 IX. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

3. The disclosure is objected to because of the following informalities: Examiner suggests that the specific references to the claims found on pages 3 and 4 of the specification should be deleted, since the claims numbers in the case are no longer the same as the originally filed claims.

Appropriate correction is required.

Claim Objections

4. Claims 11, 12, and 14-23 are objected to because of the following informalities: Since these claims are dependent claims, the first word of each claim should be changed from "A" to --The--. Appropriate correction is required.

5. Claims 15 and 20 are objected to because of the following informalities: These claims positively recite "a valve or inflow control device", however, this element is also positively recited in the independent claims. Examiner suggests changing "a valve" to --the valve--. Appropriate correction is required.

6. Claims 10 and 13 are objected to because of the following informalities: There is a lack of antecedent basis for "the solution" in line 6 of each of these claims.

Appropriate correction is required.

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7. Claims 15 and 20 are objected to because of the following informalities: Line 5 of each of these claims contains the phrase “through openings (12) in it,” but it is unclear what the word “it” refers to. Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 10-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Independent claim 10 contains the limitation that the method is “in connection with” an actuator, “in connection with” a fluid flow, and used “in connection with” a drainage pipe. Independent claim 13 also uses a similar construction. The language “in connection with” renders these claims indefinite, because it is unclear exactly what this “connection” is. Is the method actually used with an actuator, and is the actuator actually in a reservoir? Or is the actuator simply a part of a device which is a part of a larger system which is somehow linked to a fluid reservoir? Appropriate clarification and correction is required. The claims are being examined as best understood by the examiner.

With further regard to independent claim 10, though this claim is a method claim, it does not positively recite any method steps. Appropriate clarification and correction is required.

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With additional regard to claim 1, line 2 recites a “fluid reservoir” and line 3 recites “an oil and/or gas reservoir”. It is unclear whether these reservoirs are actually the same reservoir.

With regard to claims 10, 11, 13, 14, and 17, the use of slashes in these claims renders them indefinitely (for example, “oil and/or gas”, “water/salt”). It is difficult to ascertain the scope of the claims because “and/or” can mean either “and” or “or.” So the claim might require the production of oil *and* gas, or simply the production of oil *or* gas. In the same way, does “water/salt” mean either water *or* salt, or does the claim require *both* water and salt? Correction is required.

Finally, with regard to claims 10 and 13, the word “necessary” in line 4 of each of these claims renders them indefinite because it is unclear how much force is “necessary” to move the actuator.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 10, 12, 13, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Kryuchkov (SU 969958 A).

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Examiner notes that a translation of this reference was not available at the time of mailing of the Office Action. However, a translation has been requested and will be made available to the applicant as soon as it is received by the examiner.

With regard to claim 10, Kryuchkov discloses a method in connection with an actuator (1) in connection with a fluid flow or fluid reservoir (i.e. the surface reservoir into which fluid is pumped), in particular an actuator that is designed to be used in connection with a drainage pipe (i.e. the pump outlet pipe which drains into the reservoir at the surface) for the production of oil and/or gas in an oil and/or gas reservoir, wherein an osmotic cell (3, 4, 5) is used to operate the actuator and is placed in the fluid flow, whereby the necessary force and motion for the actuator to drive an inflow control device (i.e. pumping element 11) are achieved by utilizing the osmotic pressure difference between the solution in the cell and the external fluid flow/reservoir in relation to the cell (see Abstract).

With regard to claim 13, Kryuchkov discloses an actuator device (1) in connection with a fluid flow, in particular an actuator that is designed to be used in connection with a drainage pipe for the production of oil and/or gas in an oil and/or gas reservoir, wherein the actuator comprises an osmotic cell (3, 4, 5) that is designed to be placed in the fluid flow, whereby the necessary force and motion for the actuator (1) to drive an inflow control device (i.e. pumping element 11) are achieved by utilizing the osmotic pressure difference between the solution in the cell and the external fluid flow/reservoir in relation to the cell (see Abstract).

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With regard to claims 12 and 19, the actuator (1) operates a valve (18) which regulates inflow of fluid through inflow openings (i.e. the inlet of the pump outlet pipe) in the drainage pipe).

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. Claims 11, 14, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kryuchkov.

Kryuchkov does not explicitly state that the solution in the osmotic cell is a water/salt solution. Of course, examiner notes that only the Abstract of Kryuchkov's patent was available at the time of writing this Office Action.

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified Kryuchkov's apparatus to have used a

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water/salt solution in the osmotic cell, since examiner hereby takes Official Notice that it was notoriously well known in the art to use water and salt in an osmotic cell application, and it also would have been obvious to use salt blocks, as employing salt particles, pellets, or blocks was also well known (see US 5,151,093 to Theeuwes et al., column 12, lines 10-26, which discusses different solutions useful in osmotically-driven devices, and also mentions the typical physical forms the solutes can take).

Allowable Subject Matter

14. Claims 15-17 and 20-23 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hinkel et al. (US 6,069,118) discloses an osmotic device (Figure 5) used in connection with a wellbore operation.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT E. FULLER whose telephone number is (571)272-0419. The examiner can normally be reached on Monday thru Friday from 8:00 AM - 5:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer H. Gay can be reached on 571-272-7029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Shane Bomar/
Primary Examiner, Art Unit 3676

09/17/2009
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